

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of operating a network entity at an intermediate node between a mobile node in a foreign network and a correspondent node, the method comprising:

allocating to the mobile node a care-of address within the foreign network;

allocating a secondary care-of address to the network entity;[[and]]

sending a packet, addressed to the correspondent node, wherein the correspondent node has a unique address, from the network entity, wherein the packet has the secondary care-of address as a source address, wherein the packet comprises a binding update, and wherein the binding update comprises an indication of the secondary care-of address;

tunnelling, in a session between the correspondent node and the mobile node, one or more session packets from the correspondent node to the network entity, wherein the session packets have the unique correspondent node address as the source address and the secondary care-of address as the destination address;

receiving the session packets;

decapsulating the session packets; and

forwarding the decapsulated session packets to the mobile node.

2-5. (Cancelled).

6. (Previously presented) The method of claim 1, wherein the network entity translates the destination address of the session packets to a home address of the mobile node prior to forwarding the session packets to the mobile node.

7. (Previously Presented) The method of claim 3, wherein the network entity sends, in a session between the mobile node and the correspondent node, one or more session packets in a tunnel from the network entity to the correspondent node, with the care-of address as the source address and the correspondent node address as the destination address.

8. (Previously Presented) The method of claim 7, wherein the tunnelled session packets have a home address of the mobile node as an inner source address.

9. (Previously Presented) The method of claim 1, wherein the packet is a session packet in a session between the mobile node and the correspondent node.

10. (Currently amended) A method of operating a network entity at an intermediate node between a mobile node in a foreign network and a correspondent node, the method comprising:

allocating to the mobile node a care-of address within the foreign network;

allocating a secondary care-of address to the network entity;

sending a packet addressed to the correspondent node from the network entity, wherein the correspondent node has a unique address, wherein the packet has the secondary care-of address as a source address, wherein the packet comprises a binding update, and wherein the binding update comprises an indication of the secondary care-of address; and

receiving from the correspondent node a packet addressed to the secondary care-of address of the network entity and having ~~[[a]]~~the unique correspondent node address as the source address,

wherein the packet is a session packet in a session between the correspondent node and the mobile node, and the network entity forwards the session packet to the mobile node, and wherein the session packet is tunnelled from the correspondent node to the network entity and the network entity decapsulates the session packet prior to forwarding the decapsulated session packet to the mobile node.

11-12. (Canceled).

13. (Previously presented) The method of claim 10, wherein the network entity translates the destination address of the session packet to a home address of the mobile node prior to forwarding the session packet to the mobile node.

14. (Currently amended) A method of operating a network entity at a node of a packet-switched data network, wherein the network entity acts as an intermediate node between a mobile node having a care-of address in a foreign network and a correspondent node, the method comprising:

allocating to the mobile node a care-of address within the foreign network;

allocating a secondary care-of address to the network entity, the secondary care-of address corresponding uniquely to a home address of the mobile node;

sending a packet addressed to the correspondent node from the network entity, wherein the correspondent node has a unique address, wherein the packet has the secondary care-of address as a source address, wherein the packet comprises a binding update, and wherein the binding update comprises an indication of the secondary care-of address; and

receiving a packet for the mobile node addressed with the secondary care-of address and having the unique correspondent node address as the source address,

wherein the packet is a session packet in a session between the correspondent node and the mobile node, and the network entity forwards the session packet to the mobile node, and wherein the session packet is tunnelled from the correspondent node to the network entity and the network entity decapsulates the session packet prior to forwarding the decapsulated session packet to the mobile node.

15. (Cancelled).

16. (Previously Presented) The method of claim 14, including sending a binding update indicating the secondary care-of address to a home agent (HA) in a home network (HN) of the mobile node.

17. (Previously Presented) The method of claim 14, further comprising translating the destination address of one or more session packets, received from the correspondent node in a session between the correspondent node and the mobile node, from the secondary care-of address to the home address prior to forwarding the one or more session packets to the mobile node.

18. (Previously Presented) The method according to claim 1, wherein the network entity is located at a gateway to the foreign network.

19. (Previously Presented) The method according to claim 18, further comprising configuring the network entity as the default gateway of the mobile node.

20. (Previously Presented) The method according to claim 1, further comprising configuring the network entity as the first hop of the mobile node.

21. (Previously Presented) The method according to claim 1, wherein the network entity and the mobile node are configured to use MIPv6 protocols.

22. (Previously Presented) A non-transitory computer readable medium comprising instructions which, when executed, cause the method of claim 1 to be performed.

23. (Previously Presented) A non-transitory computer readable medium comprising instructions which, when executed, cause the method of claim 10 to be performed.

24. (Previously Presented) A hardware apparatus configured to perform the method of claim 1.

25. (Previously Presented) A non-transitory computer readable medium comprising instructions which, when executed, cause the method of claim 14 to be performed.